

REMARKS/ARGUMENTS

Claims 1-3, 5, 6, 10, 11, 13, 15, 17, 18, 21, 23 and 24-26 have been amended. Claims 29-80 have been cancelled from the application. New Claims 81-85 were added and are directed to aspects identified by the Examiner to be patentable over the cited art. Claims 1-28 and 81-85 are pending in the application.

Claim Rejections under USC 35 112

Claim 13 was amended to provide full antecedent basis for all features recited.

Claims 24 and 25 were amended to ensure the claims define a complete structure.

Both rejections under USC 35 112 are believed overcome and favorable reconsideration of the amended claims is respectfully requested.

Claim Rejections under USC 35 102(b)

The Examiner has rejected claims 1, 21 and 24-25 under 35 USC 102(b) as being anticipated by the teachings of Stiene (WO 02/49507). Applicant respectfully submits that the claims submitted herewith now define subject matter clearly distinguished from Stiene.

Amended claims 1, 21 and 24-25 more clearly define the subject matter of the invention and recited features not taught in Stiene. The invention is directed to an injector pump for pushing an aqueous injector fluid included in the pump to a downstream injector fluid receiving device. The principle of the injector pump of the invention is to electro-osmotically pump an integral injector fluid of known consistency to generate a head pressure for the downstream pumping of another fluid in the downstream device. The integral injector fluid, or pump priming fluid is used as a hydraulic pushing fluid for the pumping of other fluids in the downstream device. This allows, for example, for the pumping of a sample fluid without having to expose the sample fluid to an electrical potential, which may be disadvantageous. The use of an upstream injector pump with integrated pushing or priming fluid also overcomes the problems inherent with the electro-osmotic pumping of physiological fluids. As will be appreciated by the art skilled person, the direct eletro-osmotic pumping of physiological fluids may require the use of

high voltages, which could result in damage to components in the sample fluid. Moreover, the voltage needed for pumping physiological fluids depends on the ionic strength of the fluid, which will of course vary from sample to sample. By using an upstream injector pump with an integrated priming fluid of known consistency, the inventors of the present application are able to hydraulically pump downstream liquids of completely unknown consistency and completely avoid the need to expose a sample fluid to an electrical potential. This is clearly neither taught nor even suggested in Stiene. Thus, the amended claims are distinguished from the cited reference and acceptable under USC 35 102(b). Favorable consideration of the amended claims is respectfully requested.

The Examiner has rejected claims 2, 10-12, 19-20 and 22-23 under 35 USC 103(a) as being obviated by Stiene in view of U.S. Patent No. 6,013,164 to Paul.

Applicant respectfully submits that the claims submitted herewith now all define subject matter patentably distinguished over the references cited by the Examiner.

As mentioned above, the claims of the present application are directed to an injector pump with integral injector fluid or priming fluid, subject matter not at all disclosed in Stiene. Moreover, Paul also fails to disclose an injector pump as claimed. Therefore, applicant respectfully submits that even the combined teachings of Stiene and Paul would not lead the art skilled person to the injector pump structures of the present invention.

The Examiner has rejected claims 17 and 18 under 35 USC 103(a) as being obviated by Stiene in view of U.S. Patent No. 6,030,582 to Levy. Applicant respectfully reiterates that the claims of the present application are directed to subject matter not disclosed in Stiene, namely an injector pump with integral injector fluid or priming fluid for generating downstream pumping pressure. Moreover, Levy also fails to disclose an injector pump as claimed. Therefore, applicant respectfully submits that even the combined teachings of Stiene and Levy would not lead the art skilled person to the injector pump structures of the present invention.

Allowable Subject Matter

The Examiner has identified claims 3-9, 14-16 and 28 as being directed to allowable subject matter. Claim 3 has been rewritten in independent form to include all of the limitations of claim

1 from which it previously depended. Thus, claim 3 and claims 4-9, 14-16 and 28 dependent therefrom are now believed to be in allowable condition.

Claim 81 was added to define an injector pump for a downstream micro-porous flow path with a fluid receiving location thereon. New claim 82 defines an injector pump with a dry immobilized reagent in the fluidic path which becomes transportable upon wet-up of the fluidic path; new claim 83 defines an injector pump including a pair of spaced apart first and second electrodes for applying an electrical potential to the injector fluid, with one of the electrodes being located at the application end; new claim 84 defines an injector pump for pushing an injector fluid to a downstream lateral flow path device; and new claim 85 defines an injector pump with a pair of spaced apart electrodes located on opposite sides of the isolator and for operation at a potential of less than 100 Volts. Therefore, new claims 81 to 85 are directed to subject matter found allowable by the Examiner and are believed to be acceptable for allowance.

Conclusion

Applicant respectfully submits that the amended independent claims 1, 3 and 81 to 85 submitted herewith and all claims dependent therefrom now define subject matter patentably distinguished over the references cited by the Examiner.

A request for a one (1) month extension of time is enclosed herewith. The Commissioner is hereby authorized to debit \$330.00 from Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP, representing the fees for a one-month extension of time and one additional independent claims (7 independent claims overall). The Commissioner is further authorized to debit any additional amount required, and to credit any overpayment to the above-noted deposit account.

Applicant submits that the application is now in condition for further examination and awaits further action.

The Commissioner is hereby authorized to charge any additional fees, and credit any over payments to Deposit Account No. 501593, in the name of Borden Ladner Gervais LLP.

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